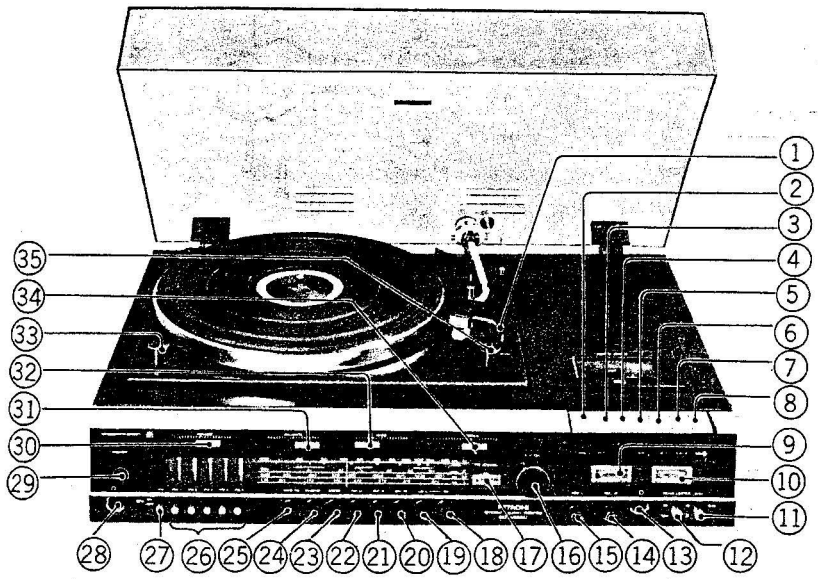
HITACHI sdt-2680

SERVICE MANUAL

No. 778



1. RECORD CUEING LEVER
2. REWIND BUTTON
3. RECORD BUTTON
4. PLAY BUTTON
5. FAST FWD BUTTON
6. STOP BUTTON
7. EJECT BUTTON
8. PAUSE BUTTON
9. VU METER (L)
10. VU METER (R)
11. TAPE SELECTER (NOR./CrO2)
12. NOISE LIMITER SWITCH
13. MIC. SOCKET
14. REC. LEVEL CONTROL (R)
15. REC. LEVEL CONTROL (L)
16. TUNING CONTROL
17. TUNING METER
18. TR BAND SWITCH
19. LW BAND SWITCH
20. MW BAND SWITCH
21. SW BAND SWITCH
22. FM BAND SWITCH
23. MONO./STEREO SWITC
24. PHONO SWITCH
25. TAPE SWITCH
26. FM PRE TUNED KNOB
27. AFC SWITCH
28. HEADPHONE SOCKET
29. POWER SWITCH
30. VOLUME CONTROL
31. BALANCE CONTROL
32. BASS CONTROL
33. RECORD SPEED SELECT
34. TREBLE CONTROL
35. RECORD INTERRUPT LE

SPECIFICATIONS

General Section

Semiconductors	6 IC, 26 Transistor, 1 FET, 33 Diode
Power Supply	220V, 50 Hz UK : 240V, 50 Hz
Power Consumption	160 W (at max output)
Dimensions	19.6 (H) × 58.9 (W) × 41.5 (D) cm
Weight	14.5 kg

Amplifier Section

Power Output	20 Watts × 2 (4Ω SINUS)
Frequency Response	40～30,000 Hz (−3 dB, at Volum max)
Signal to Noise Ratio	68 dB or more
Tone Control	Bass: ±15 dB (100 Hz)
	Treble: ±15 dB (10,000 Hz)
Input Sensitivity and Impedance	MIC: −65 dB/470Ω
	TAPE IN: 550mV/250kΩ
Output Level and Impedance	EXT. SP.: 4Ω
	HEADPHONE...8Ω
	TAPE OUT: 150mV/150kΩ

Tuner Section

Circuit System	4 Band Superheterodyn
Tuning Range	FM: 88～108 MHz.
	SW: 5.9～10 MHz
	MW: 530～1,605 kHz
	LW: 150～350 kHz
	LW-TR: 150～350 kHz
Usable Sensitivity	FM: 3.5μV (IHF S/N 30 dB)
	SW: 100μV/m (IHF S/N 20 dB)
	MW: 200μV/m
	LW: 400μV/m
	LW-TR: 3mV/m
Intermediate Frequency	FM: 10.7 MHz
	AM: 468 kHz
FM Stereo Separation	38 dB
FM Signal to Noise Ratio	60 dB
FM Capture Ratio	4 dB
Selectivity	FM: 36 dB (400 kHz)
	AM: 34 dB (10 kHz)
Antenna	FM/SW: External Antenna
	MW/LW: Ferrite Core Antenna
FM Frequency Response	40～30,000 Hz (−3 dB)

Player Section

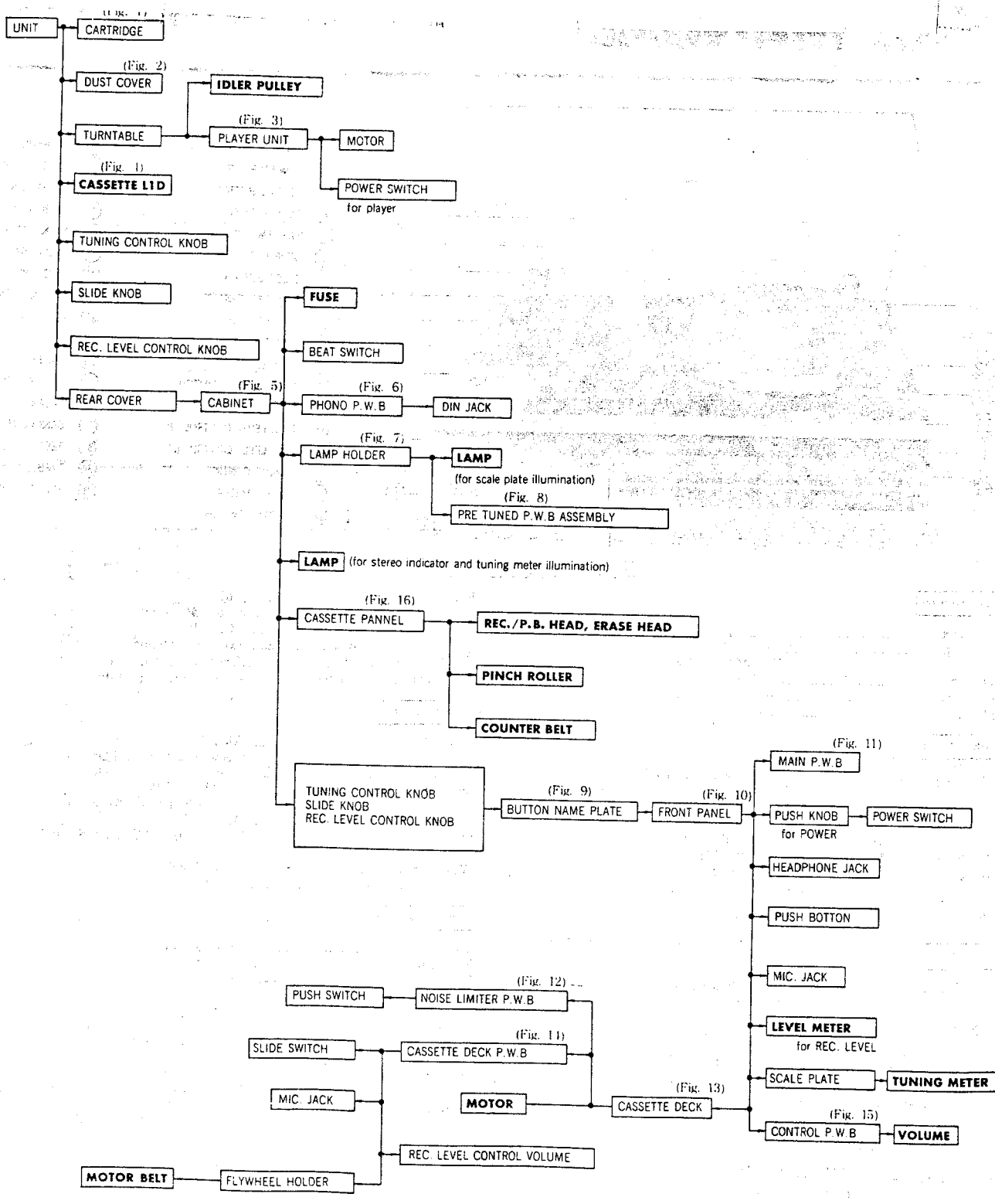
Player Unit	AR-301 Hi
System	2 Speed Idler Wheel Drive.
Turntable	30 cm
Speed	33-1/3, 45, RPM
Motor	4−Pole Synchronous Motor
Cartridge	IM
Stylus	Diamond. (HITACHI DS-ST-101)
Pressure of Stylus	2.5g
Wow and flutter	0.08% RMS
Signal to Noise Ratio	45 dB

Tape Deck Section

Tape	Cassette Tape
Tape Speed	1-7/8 ips (4.75cm/s)
Recording System and Bias Frequency	AC Bias, 57±5 kHz
Erase System	AC Erase
Track System	4 Track 2 Channel 2 Program
Frequency Response	Normal : 50～10,000 Hz (±6 dB)
	CrO2 : 50～13,000 Hz (±6 dB)
Signal to Noise Ratio	48 dB or more
Motor	DC Motor (Mechanical Governer Control)
Wow and Flutter	0.28% WRMS
Playing or Recording time	60 min for Double Pass (C-60)
Channel Separation	30 dB
Erase Ratio	60 dB or more
Cross Talk	50 dB

STEREO MUSIC CENTER

JUNE 1975


UNIT
CARTRIDGE
(Fig. 2)
DUST COVER
IDLER PULLEY
(Fig. 3)
TURNTABLE
PLAYER UNIT
MOTOR
(Fig. 1)
CASSETTE LID
POWER SWITCH
for player
TUNING CONTROL KNOB
SLIDE KNOB
REC. LEVEL CONTROL KNOB
REAR COVER
(Fig. 5)
CABINET
FUSE
BEAT SWITCH
(Fig. 6)
PHONO P.W.B
DIN JACK
(Fig. 7)
LAMP HOLDER
LAMP
(for scale plate illumination)
(Fig. 8)
PRE TUNED P.W.B ASSEMBLY
LAMP (for stereo indicator and tuning meter illumination)
(Fig. 16)
CASSETTE PANNEL
REC./P.B. HEAD, ERASE HEAD
PINCH ROLLER
COUNTER BELT
TUNING CONTROL KNOB
SLIDE KNOB
REC. LEVEL CONTROL KNOB
(Fig. 9)
BUTTON NAME PLATE
(Fig. 10)
FRONT PANEL
(Fig. 11)
MAIN P.W.B
PUSH KNOB
POWER SWITCH
for POWER
HEADPHONE JACK
PUSH BOTTON
MIC. JACK
LEVEL METER
for REC. LEVEL
SCALE PLATE
TUNING METER
(Fig. 13)
CASSETTE DECK
(Fig. 15)
CONTROL P.W.B
VOLUME
(Fig. 12)
PUSH SWITCH
NOISE LIMITER P.W.B
(Fig. 11)
SLIDE SWITCH
CASSETTE DECK P.W.B
MIC. JACK
MOTOR
REC. LEVEL CONTROL VOLUME
MOTOR BELT
FLYWHEEL HOLDER

SDT - 2680.

DISASSEMBLY

CARTRIDGE

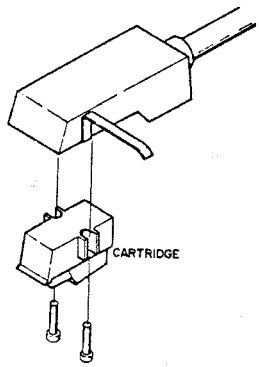


Fig. 1

DUST COVER

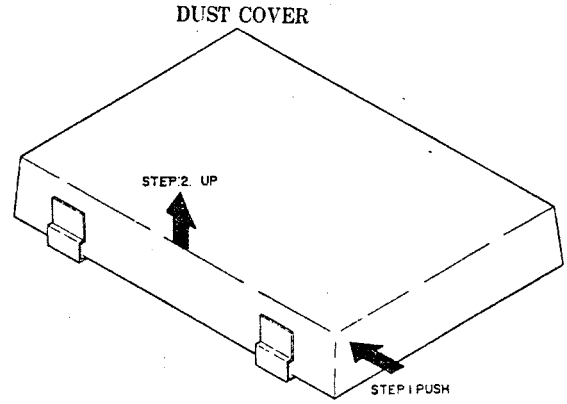


Fig. 2

PLAYER UNIT

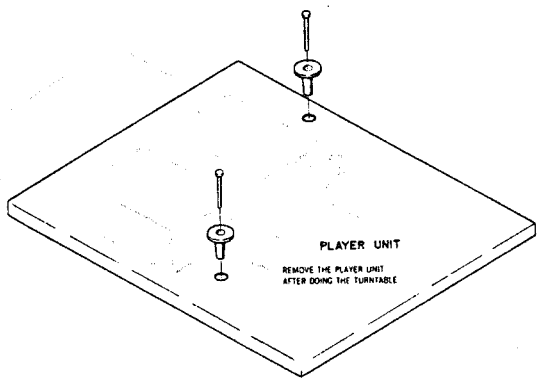
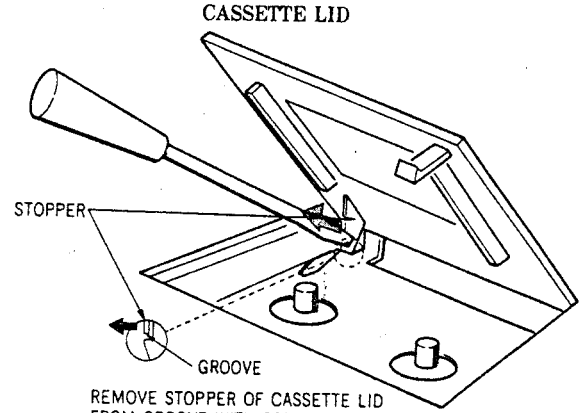


Fig. 3

CASSETTE LID



REMOVE STOPPER OF CASSETTE LID FROM GROOVE WITH SCREWDRIVER.

Fig. 4

CABINET

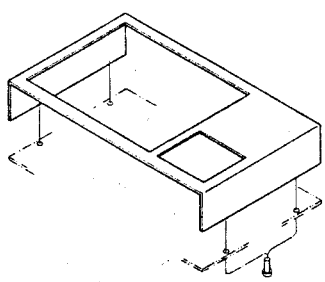


Fig. 5

PHONO P.W.B

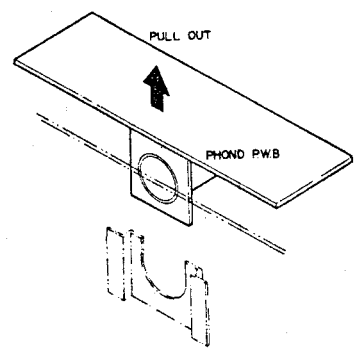


Fig. 6

LAMP HOLDER

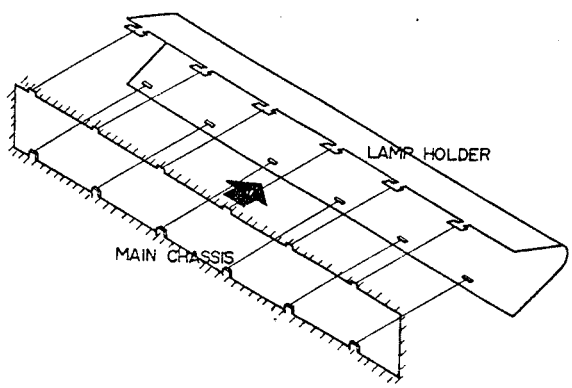


Fig. 7

PRE TUNED P.W.B

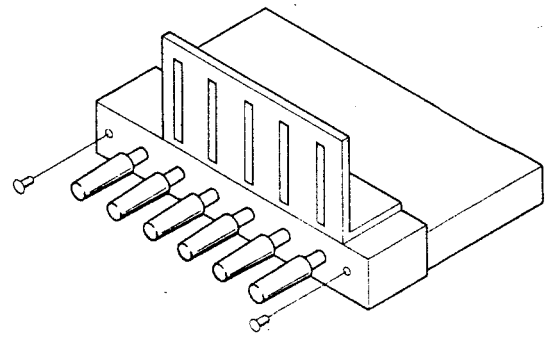


Fig. 8

BUTTON NAME PLATE

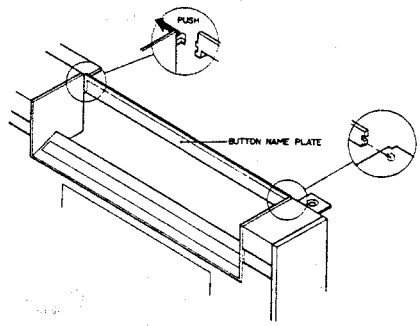


Fig. 9

MAIN P.W.B

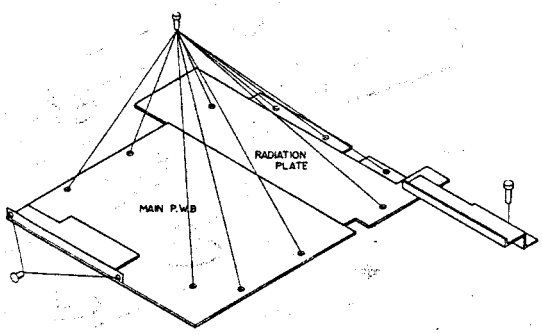


Fig. 11

CASSETTE DECK

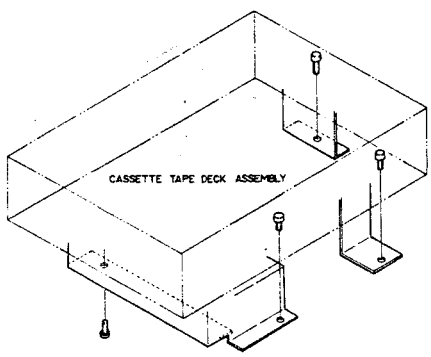


Fig. 13

CONTROL P.W.B

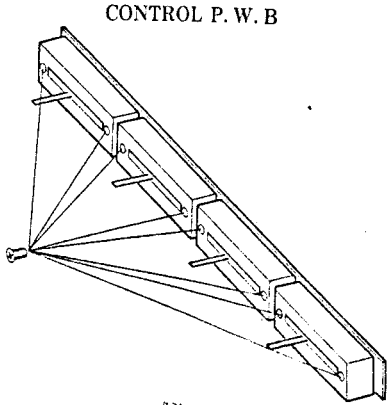


Fig. 15

FRONT PANEL

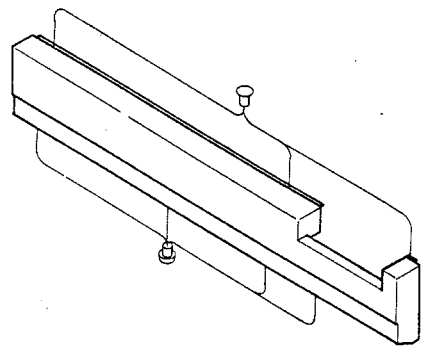


Fig. 10

NOISE LIMITER P.W.B

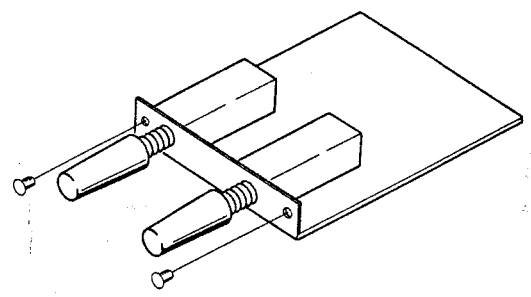


Fig. 12

CASSETTE DACK P.W.B

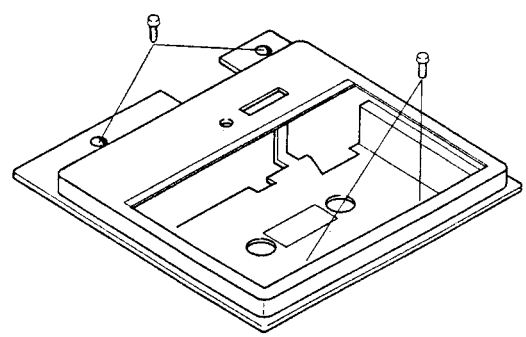


Fig. 14

CASSETTE PANEL

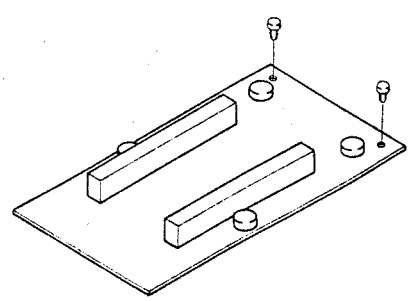


Fig. 16

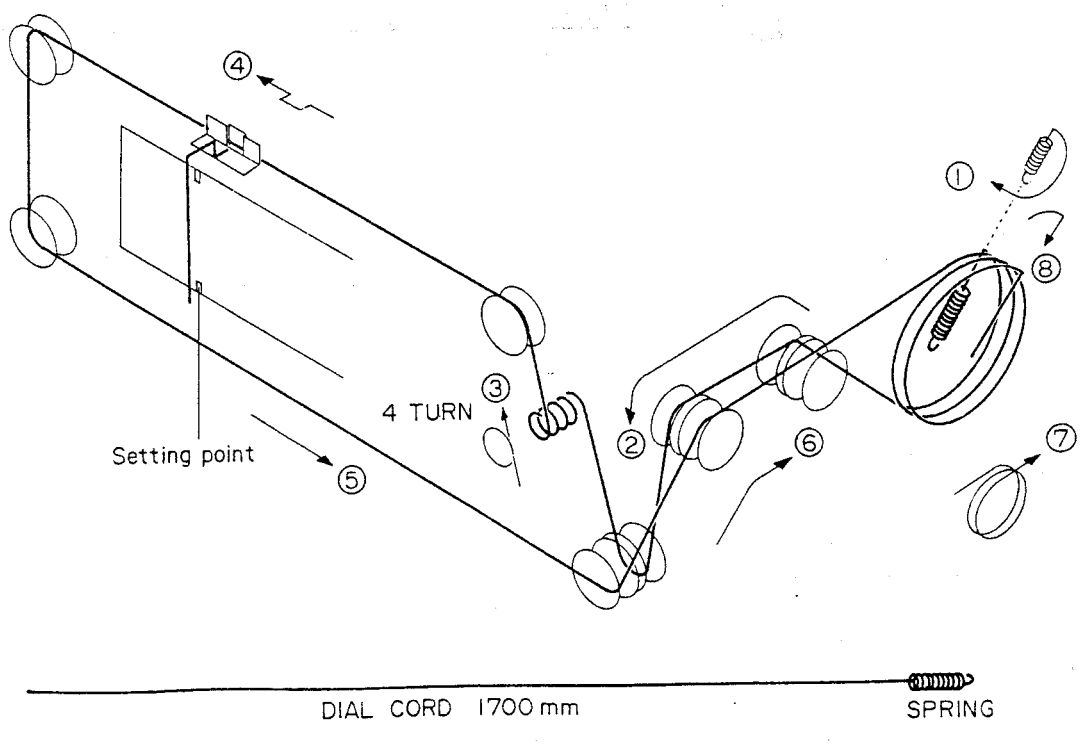
LUBRICATION

Lubricate one or two drops of machine oil to rotating point or lubricate grease to sliding point.
Lubricate the respective parts listed below once every 1000 hours or once a year under normal conditions of use.
Avoid oiling then excessively, or rotation may become irregular because of oil splashes.

	Lubrication point	Oil or grease
Cassette deck	Motor shaft bearing	Oil
	Capstan shaft bearing	Oil
	Pinch roller shaft bearing	Oil
Auto player	Turn table shaft bearing	Oil
	Idler shaft bearing	Oil
	Cam gear sliding groove	grease

DIAL CORD STRINGING

STEP 1. Turn pulley of variable capacitor fully counterclockwise.
STEP 2. String dial cord.
STEP 3. Set pointor to setting point on the scale plate.
STEP 4. Adhere pointer and dial cord.



TAPE DECK MECHANICAL ADJUSTMENT

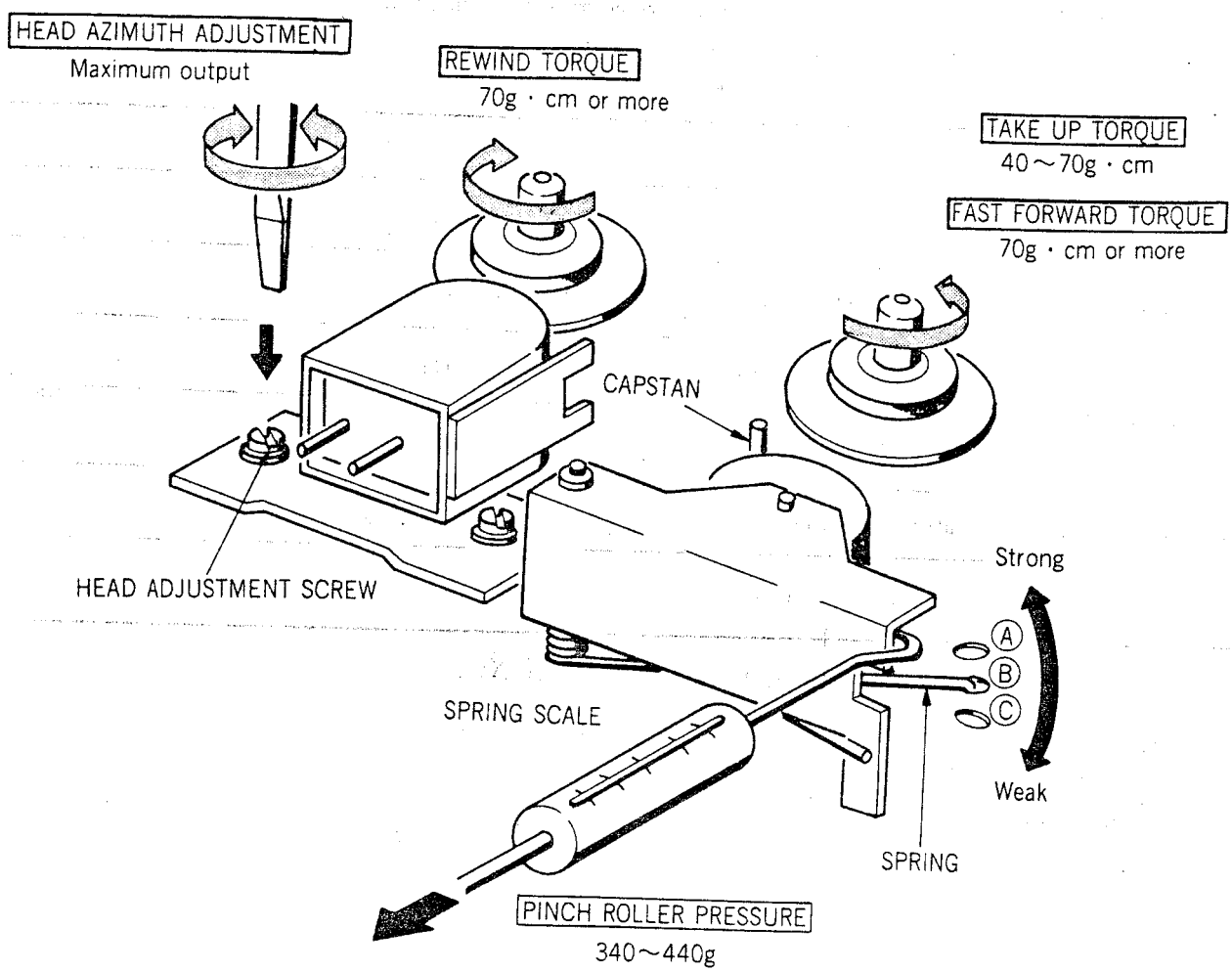


Fig. 17

HEAD AZIMUTH

.oad instrument with standard tape for azimuth adjustment.
)bserve the output with VTVM connected to P3A (right-hannel), P3B (left-channel) as shown in Fig. 18.
\djust head adjustment screw (See Fig. 17) for maximum utput.

TURN TABLE TORQUE

ake up torque 40～70g · cm (In PLAY mode)
ast forward torque 70g · cm or more (In F.F. mode)
ewind torque 70g · cm or more (In REW. mode)

PINCH ROLLER PRESSURE

Adjust by changing the hooking position of the spring so that spring scale reads 340～440g when the pinch roller departs from the capstan.

NOTE

To increase the pressure : hook the spring in hole Ⓐ
To reduce the pressure : hook the spring in hole Ⓒ

TAPE DECK AMP ADJUSTMENT

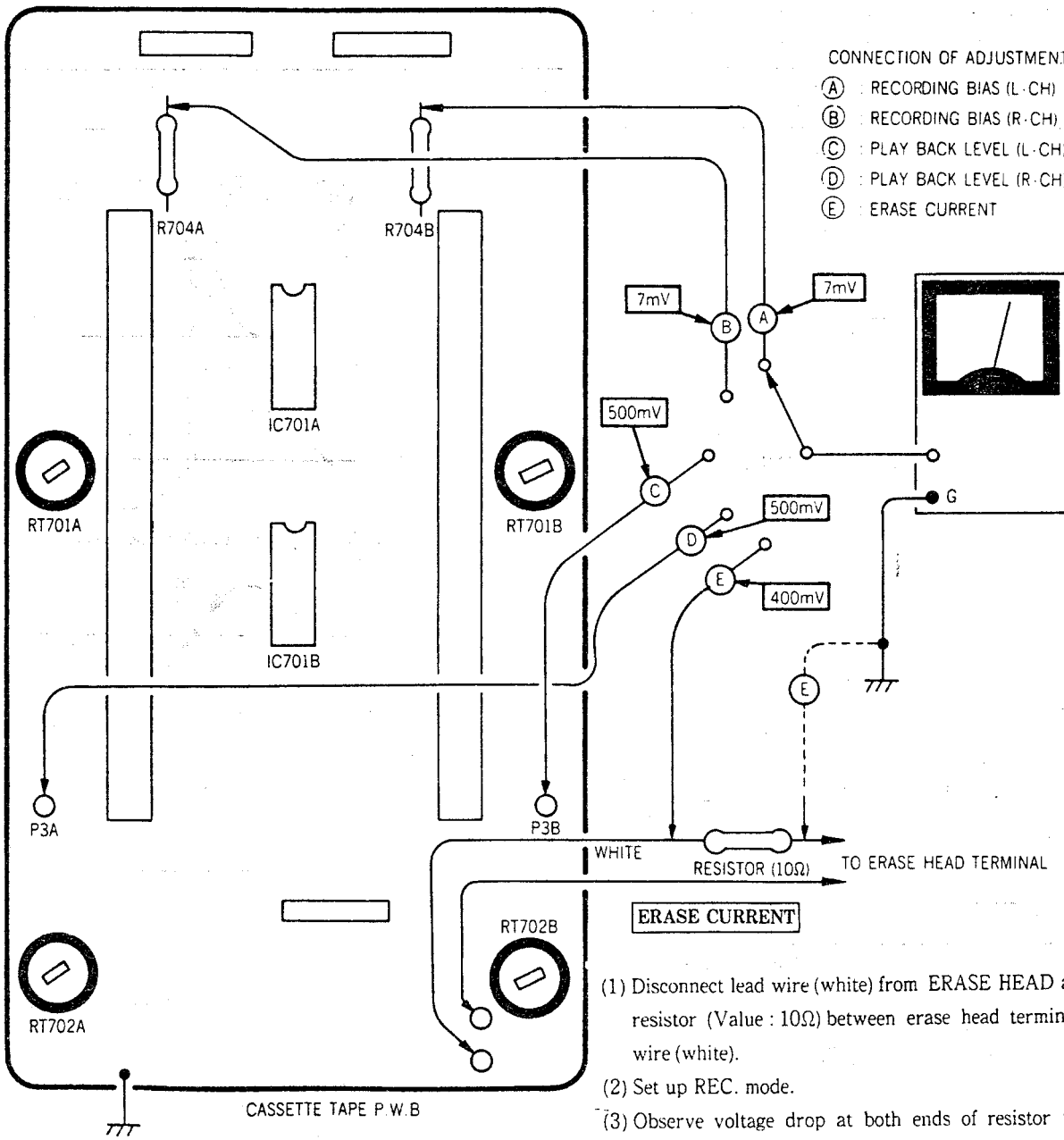


Fig. 18

RECORDING BIAS ADJUSTMENT

(1) Set up RECORDING mode.

(2) Observe voltage drop at both ends of resistor R704A (right-channel), R704B (left-channel) with a VTVM connected to the resistor R704A, R704B as shown in Fig.18.

(3) Adjust RT702A (right-channel), RT702B (left-channel) for 7mV.

ERASE CURRENT

(1) Disconnect lead wire (white) from ERASE HEAD and Connect resistor (Value : 10Ω) between erase head terminal and lead wire (white).

(2) Set up REC. mode.

(3) Observe voltage drop at both ends of resistor with VTVM connected to resistor.

(4) Check to be 400mV.

PLAY BACK LEVEL ADJUSTMENT

(1) Load instrument with standard tape for play back adjustment.

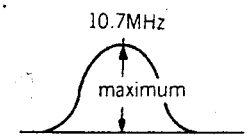
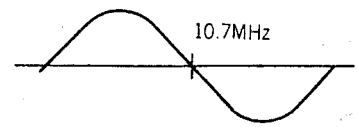
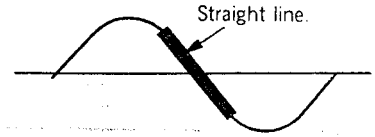
(2) Observe output of right and left channel with a VTVM connected to P3A (right-channel) P3B (left-channel) as shown in Fig.18.

(3) Adjust RT701A (right channel), RT701B (left channel) for 500mV

TUNER CIRCUIT ADJUSTMENT

Before adjustment.

1. Set knobs (BASS, TLEBLE, VOLUME) fully clockwise.
2. Set knob (BALANCE) to center.
3. Set function buttons (FM, MW, LW, SW, to adjustment position and function button (MONO/STEREO) to "STEREO".
4. Disconnect speaker cord from speaker jack.

Step	Adjustment circuit		Connection	Signal or swe ep generator	Pointer position	Adjustment part. (See Fig. 20)	How to adjust.
				FM CIRCUIT			
①	FM-IF		Fig. 21	10.7MHz	High freq. end	T203, T102, T202	① Turn core (T203) full counterclockwise. ② Adjust core (T102, T202) for maximum output.  ③ Adjust core (T203) for symmetrical sinewave.  ④ Adjust core (T202) to be straight on center. 
②	FM-RF	Covering	Fig. 22	87MHz (For Germany: 87.5MHz)	Low freq. end	RT101	① Adjust core for maximum output.
				109MHz (For Germany: 108MHz)	High freq. end	L102	
		Tracking		90MHz	90MHz	T101, T103	
				106MHz	106MHz	CT101, CT102	
				AM CIRCUT			
①	AM-IF		Fig. 23	468kHz	High freq. end	T151, T201	① Adjust core for maximum output. For T162 and T163, Adjust moving coil on ferrite-core for maximum output.
②	SW-RF	Covering	Fig. 24	5.7MHz	Low freq. end	T164	
				10.5MHz	High freq. end	CT164	
		Tracking		6.5MHz	6.5MHz	T161	
				10.0MHz	10.0MHz	CT161	
③	LW-RF	Covering	Fig. 23	145kHz	Low freq. end	T166	
				360kHz	High freq. end	CT166	
		Tracking		160kHz	160kHz	T163	
				330kHz	330kHz	CT163	
④	MW-RF	Covering		505kHz	Low freq. end	T165	
				1,650kHz	High freq. end	CT165	
		Tracking		600kHz	600kHz	T162	
				1,400kHz	1,400kHz	CT162	
⑤	LW(TR)	Covering		145kHz	Low freq. end	T166	
				360kHz	High freq. end	CT166	
		Tracking		160kHz	160kHz	T160	
				330kHz	330kHz	CT160	

FM MULTIPLEX ADTUSTMENT

(1) Connect short clip to terminal of R212 and ground as shown in Fig. 19.
(2) Connect frequency counter to TP5 (R304) and ground as shown in Fig. 19.
(3) Adjust RT301 for 19 kHz.

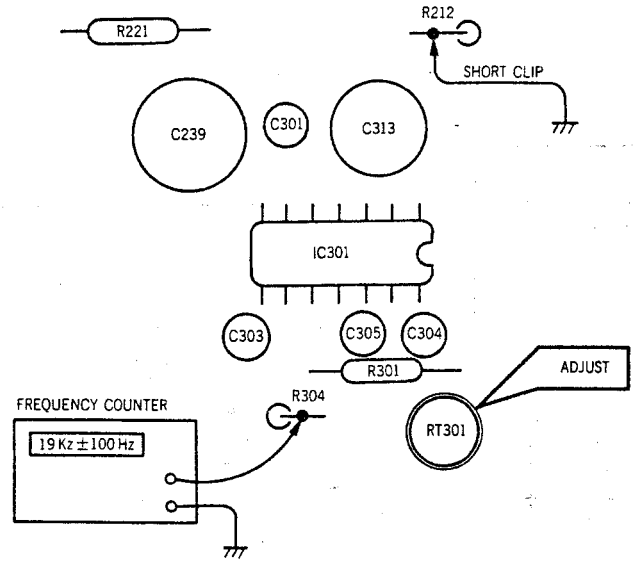


Fig. 19

INTENAL VIEW

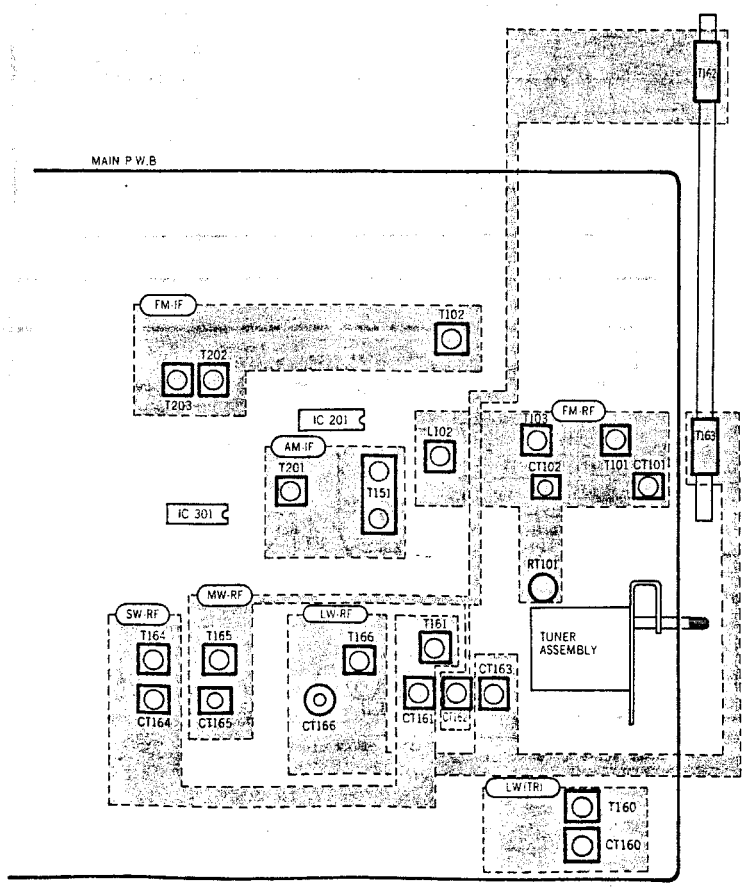


Fig. 20

CONNECTION

FM-IF ADJUSTMENT

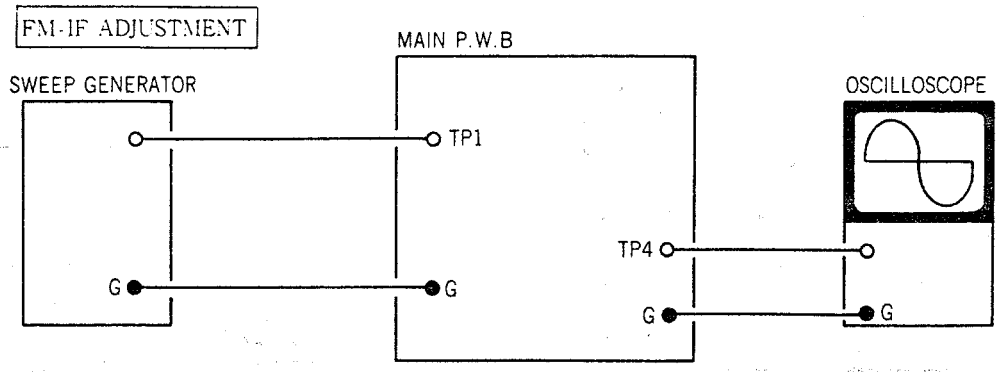
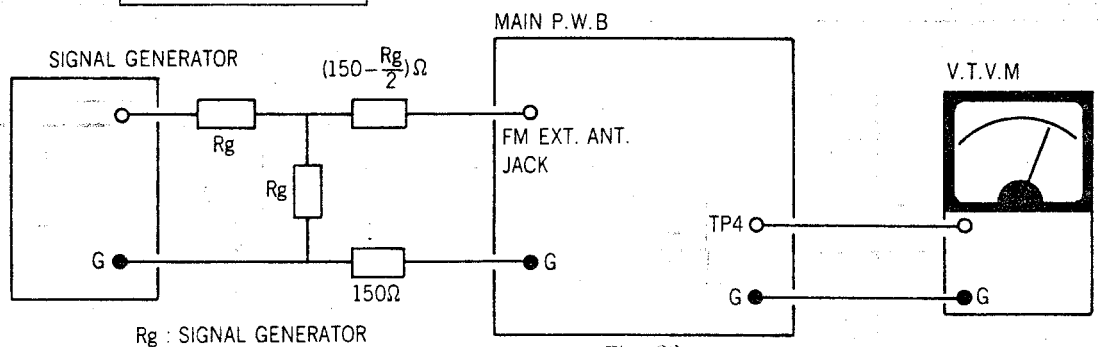


Fig. 21

FM-RF ADJUSTMENT



Rg : SIGNAL GENERATOR
OUTPUT IMPEDANCE

Fig. 22

AM-IF, AM-RF ADJUSTMENT

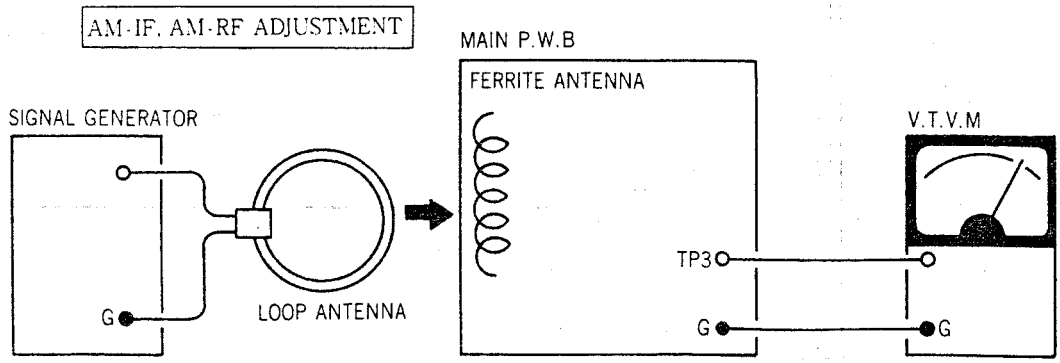


Fig. 23

SW-RF ADJUSTMENT

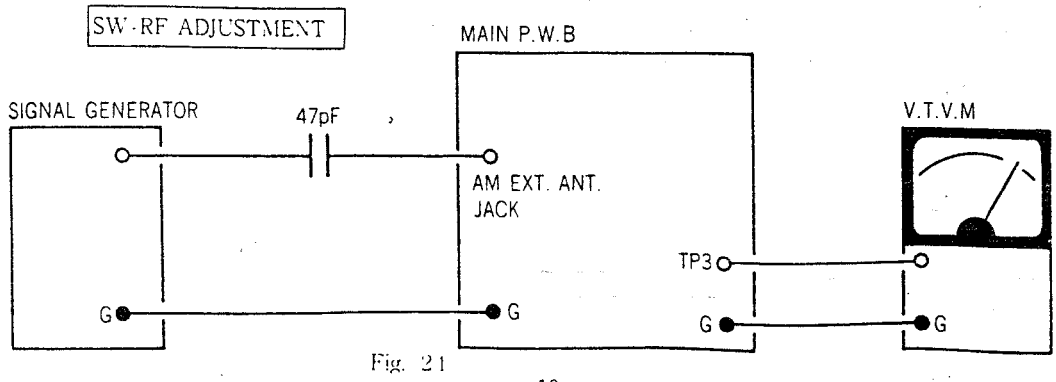


Fig. 21

PLAYER ADJUSTMENT

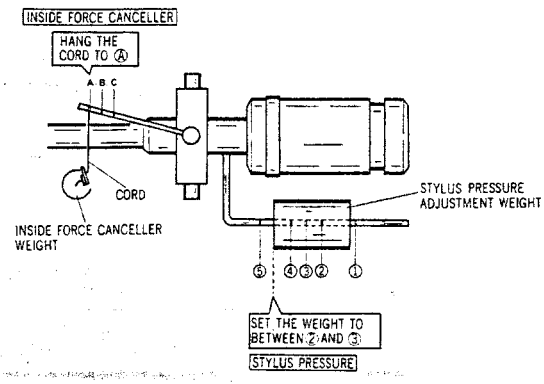


Fig. 25

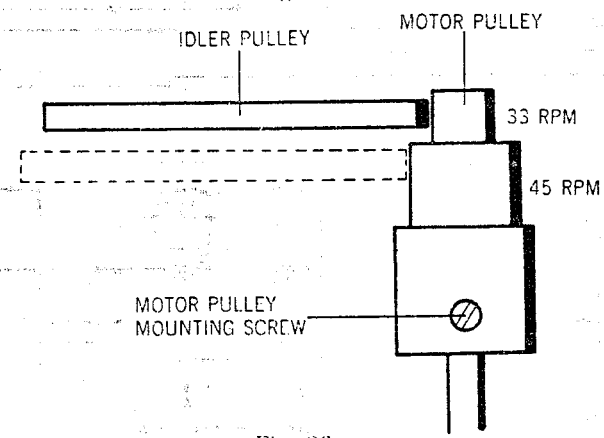


Fig. 26

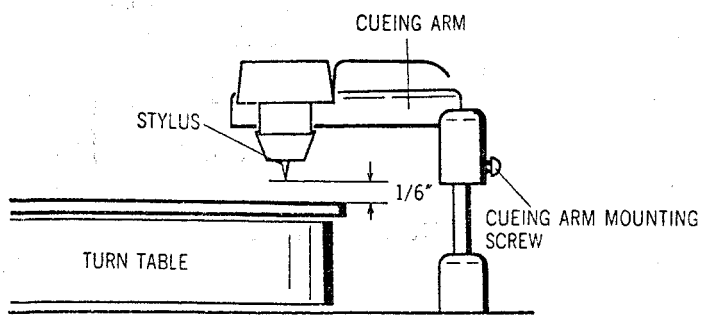


Fig. 27

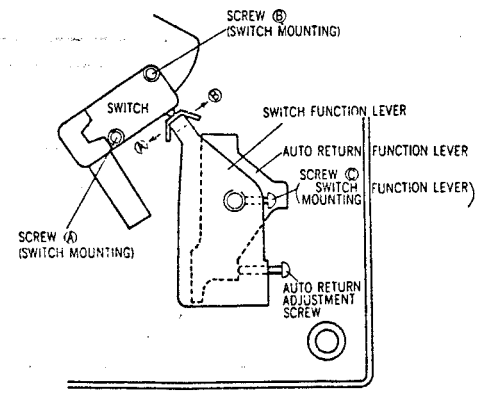


Fig. 28

1. Stylus plessure and inside force canceller

A cartridge requiring a stylus pressure of 1.5 to 3.5 grams can be used on the tone arm of this record player. The cartridge supplied should be used with a stylus pressure of 2.5 grams; Set the stylus pressure adjustment weight to the range between ④ and ⑤ mark (See Fig. 25). The relationship between the marks on the scale and the stylus pressure is

Scale		Stylus pressure
1	—	1g
2	—	2g
3	—	2.5g
4	—	3g

INSIDE FORCE CANCELLER

Hang the inside force canceller weight on graduation Ⓐ. This compensates the small force tending to move the tone arm sideways. (See Fig. 25)

2. Idler height

Disconnect player from AC source and remove turntable. Set speed selector knob to 33 (or 45) rpm, and then idler pulley rests against the 33 (or 45) rpm step on the motor pulley. Using a screwdriver, Loosen motor pulley mounting screw. Move motor pulley until idler pulley is centered on the 33 (or 45) rpm step of motor pulley and tighten motor pulley mounting screw. (See Fig. 26)

3. Pick-up arm height

Loosen cueing arm mounting screw and set cueing lever to "UP". Moving cuing arm, adjust stylus to clear a full stack of records by 1/8", (4mm). After adjustment, tighten cueing arm mounting screw. (See Fig. 27)

4. Auto return and power switch timming

When replacing pick-up arm assembly, check the timing of auto return and power switch.

- **Auto return timing**

  Adjust auto return screw to be 2¼"~2½" (5.6~6.5cm) on lifting position between center spindle and stylus when auto returning.

  Late; Turn clockwise

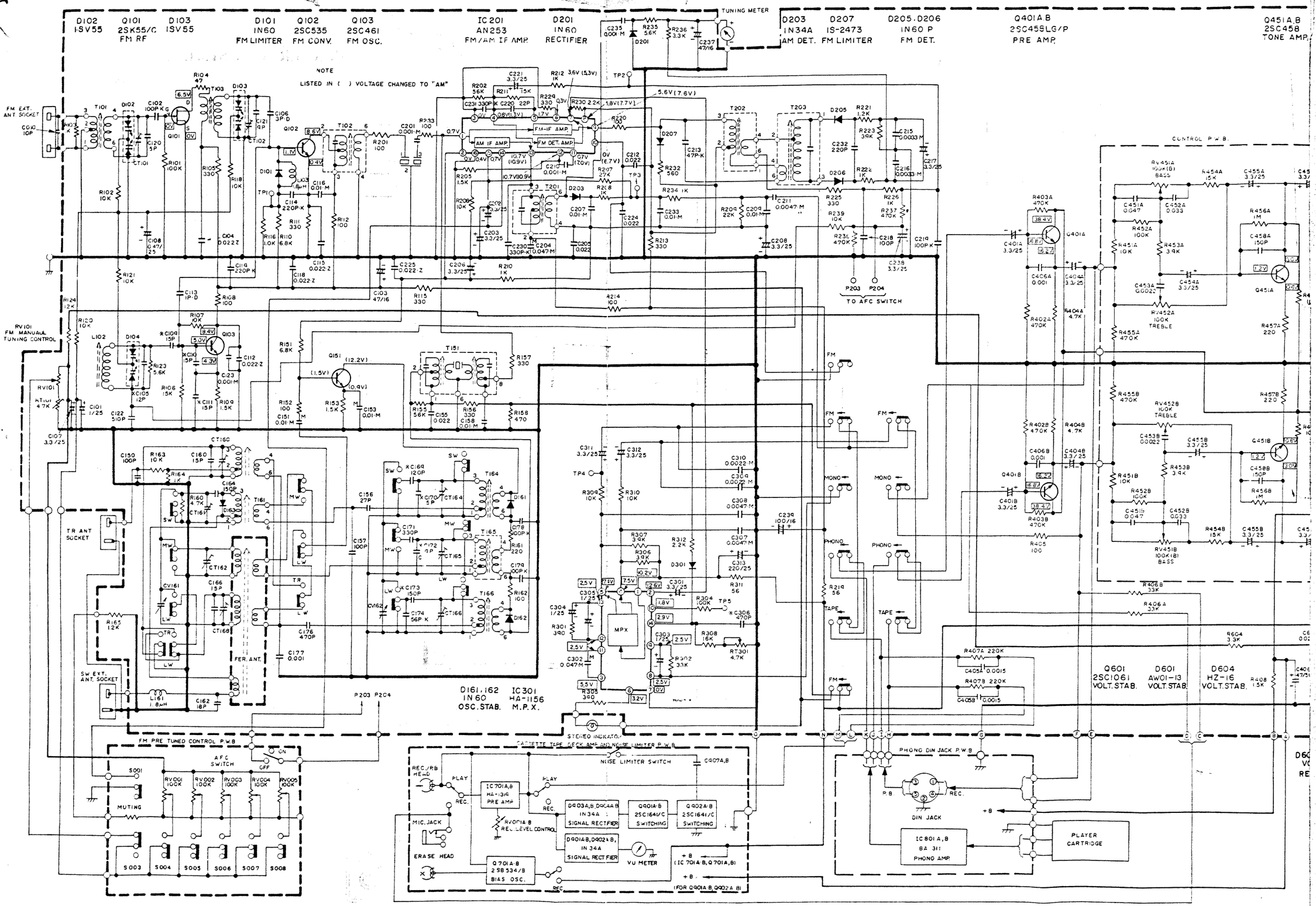
  Early; Turn counterclockwise

- **Power switch position**

  Losen switch function lever mounting screw, adjust switch function lever to be 6⅓" (16cm) on distance between center spindle and stylus when switching on. (See Fig. 28)

  Late; Move Ⓑ

  Early; Move Ⓐ


D102 1SV55
Q101 2SK55/C FM RF
D103 1SV55
D101 IN60 FM LIMITER
Q102 2SC535 FM CONV.
Q103 2SC461 FM OSC.
IC201 AN253 FM/AM IF AMP.
D201 IN60 RECTIFIER
TUNING METER
D203 IN34A AM DET.
D207 IS-2473 FM LIMITER
D205.D206 IN60 P FM DET.
Q401A.B 2SC458LG/P PRE AMP.
Q451A.B 2SC458 TONE AMP.
NOTE
LISTED IN ( ) VOLTAGE CHANGED TO "AM"
FM EXT. ANT SOCKET
AM IF AMP.
FM-IF AMP.
FM DET. AMP.
CONTROL P.W.B.
RV101 FM MANUAL TUNING CONTROL
TO AFC SWITCH
TR ANT SOCKET
SW EXT. ANT. SOCKET
FER. ANT.
D161,162 IN60 OSC.STAB.
IC301 HA-1156 M.P.X.
MPX
FM PRE TUNED CONTROL P.W.B
A.F.C SWITCH
MUTING
CASSETTE TAPE DECK AMP AND NOISE LIMITER P.W.B
NOISE LIMITER SWITCH
REC./PB HEAD
ERASE HEAD
MIC. JACK
IC701A,B HA-1316 PRE AMP
Q701A-B 2SB534/B BIAS OSC.
DIN JACK
PHONO DIN JACK P.W.B
IC801A,B BA 311 PHONO AMP.
PLAYER CARTRIDGE
VU METER
STEREO INDICATOR
Q601 2SC1061 VOLT.STAB.
D601 AWO1-13 VOLT.STAB.
D604 HZ-16 VOLT.STAB.

D203 IN34A AM DET. | D207 IS-2473 FM LIMITER | D205.D206 IN60 P FM DET. | Q401A,B 2SC458LG/P PRE AMP. | Q451A,B 2SC458 TONE AMP. | D501A,B 502A,B HV-46 TEMP. | Q501A,B 2SA836 A CLASS AMP. | Q502A,B 2SC458 AF AMP. | Q503A,B 2SC1213 DRIVER | Q504A,B 2SA673 DRIVER | Q505A,B 2SC1061 POWER | Q506A,B 2SA671 POWER

TUNING METER

CONTROL P.W.B.

Q601 2SC1061 VOLT. STAB. | D601 AW01-13 VOLT. STAB. | D604 HZ-16 VOLT. STAB. | D605~D608 V0-3C RECTIFIER | D609 W0 6A RECTIFIER

TO AFC SWITCH

FM | MONO | PHONO | TAPE

PHONO DIN JACK P.W.B.

DIN JACK | P.B. | REC. | PLAYER CARTRIDGE | IC 801 A,B BA 311 PHONO AMP

Q901A·B 2SC1641/C SWITCHING | Q902A·B 2SC1641/C SWITCHING | VU METER | + B (IC 701A·B, Q701A·B) | + B (FOR Q901A·B, Q902A·B)

FUSE LIMITER P.W.B. | LIMITER SWITCH

POWER TRANSFORMER | THERMAL FUSE | POWER SW | AC MOTOR | PLAYER UNIT | For Scandinavia

LEAF SW. DC MOTOR (FOR CASSETTE TAPE DECK)

SCALE PLATE ILLUMINATION LAMP | TUNING METER ILLUMINATION LAMP | LEVEL METER ILLUMINATION LAMP

HEADPHONE SOCKET | FRONT SPEAKER (R) SOCKET | BACK SPEAKER(R) SOCKET | BACK SPEAKER(L) SOCKET | FRONT SPEAKER (L) SOCKET

NOTE

1. Voltage measured at base of chassis with minimum volume control and no signal
2. Nomenclature of Resistors and Capacitors

RESISTORS

Value	No indicated Ω	K 1000Ω	M 1000KΩ	
Wattage	No indicated 1/4W			
Tolerance	No indicated ±10%	K ±10%		
Sort	No indicated Carbon film	RC Composition	RS Metal oxide	

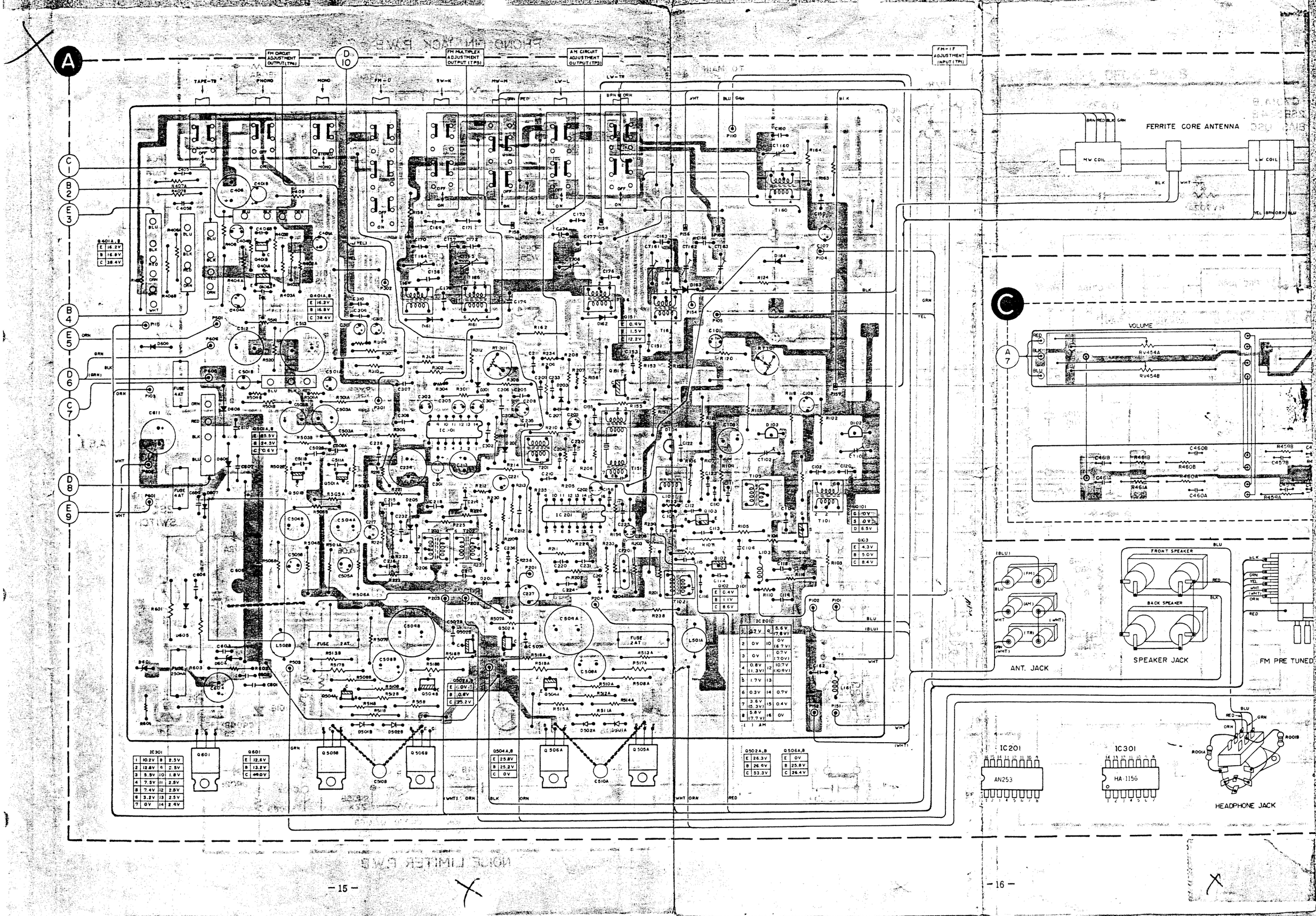
Example: R101 ..... Circuit No. | 150 ..... Value | RS-1/2-K ..... Sort, Wattage, Tolerance

CAPACITORS

Value	No indicated μF	P pF		
Voltage	No indicated 50(V)			
Tolerance	No indicated ±20%	J ±5%	M ±20%	Z +80 −20%
	D ±0.5pF	C ±0.25pF		
Sort	Ceramic	Electrolytic	Mylar	

Example: C101 ..... Circuit No. | 10/25 ..... Value: voltage | ..... Sort

3. Be sure to make your orders of resistors and capacitors with value, voltage, tolerance and sort.
4. When repairing capacitors marked with ⊕, use specified ones based on parts list since required temperature characteristics.


FM CIRCUIT ADJUSTMENT OUTPUT (TP4)
FM MULTIPLEX ADJUSTMENT OUTPUT (TP5)
AM CIRCUIT ADJUSTMENT OUTPUT (TP3)
FM-IF ADJUSTMENT INPUT (TP1)
TAPE-TR
PHONO
MONO
FM-D
SW-K
MW-H
LW-L
LW-TR
FERRITE CORE ANTENNA
MW COIL
LW COIL
VOLUME
RV454A
RV454B
ANT. JACK
SPEAKER JACK
FM PRE TUNED
FRONT SPEAKER
BACK SPEAKER
HEADPHONE JACK
IC201
AN253
IC301
HA-1156
FUSE 4AT
FUSE 2AT
FUSE 250mA

FM-IF ADJUSTMENT INPUT (TP1)

FERRITE CORE ANTENNA

MW COIL

LW COIL

B

IC801A,B

1	1.9V	5	0.5V
2	0.5V	6	13.5V
3	0V	7	2.9V
4	0V		

REC/PLAY JACK

BA 311

C

VOLUME

BALANCE

BASS

TREBLE

Q451A,B
E 0.6V
B 1.2V
C 3.0V

FRONT SPEAKER

BACK SPEAKER

ANT. JACK

SPEAKER JACK

FM PRE TUNED CONTROL VOLUME

IC201

HA1253

IC301

HA-1156

HEADPHONE JACK

TUNING METER

D

2P SOCKET TO PLAYER

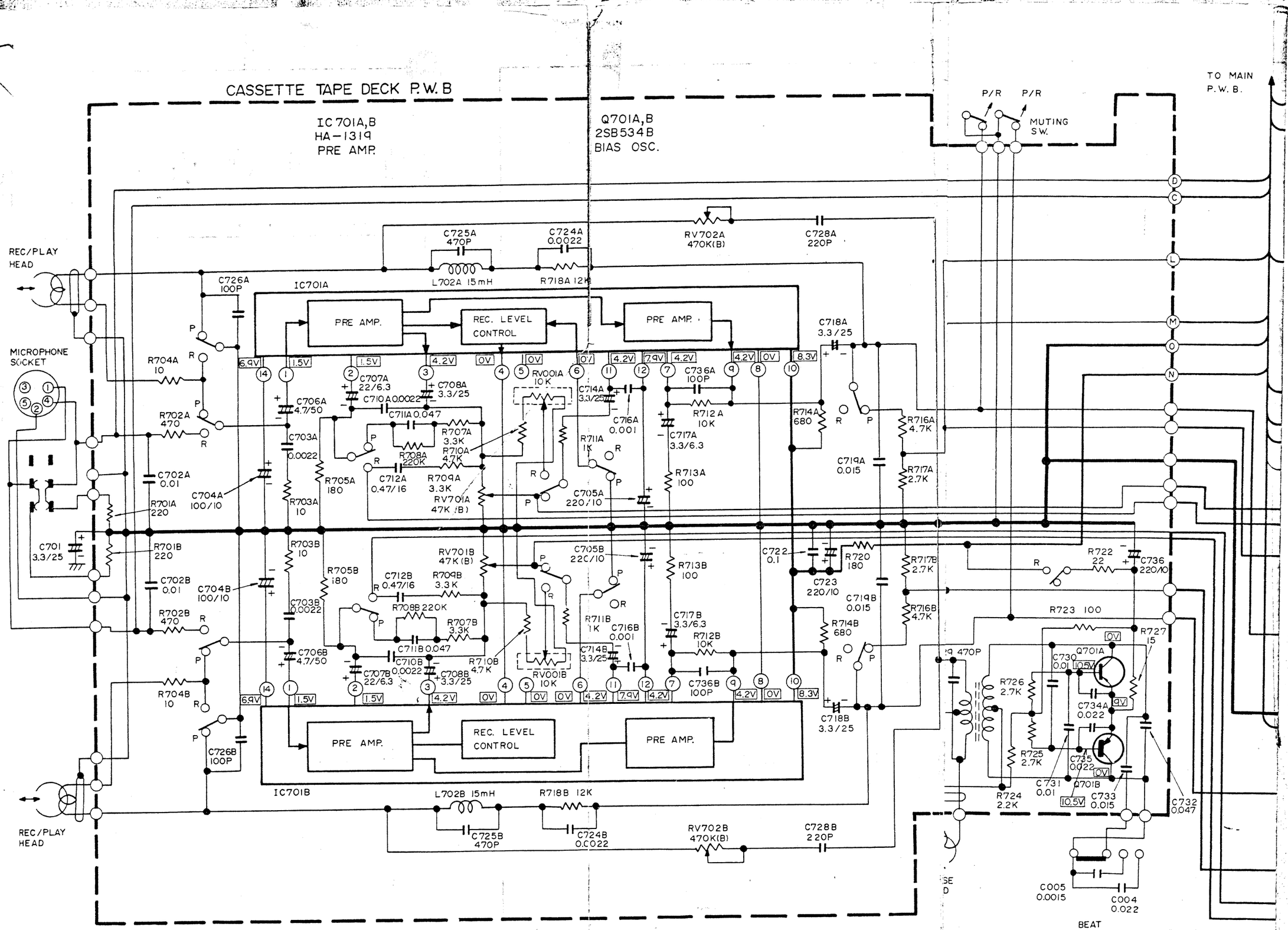
POWER SWITCH

STEREO INDICATOR

FUSE (for England)

POWER TRANSFORMER

3P TERMINAL


CASSETTE TAPE DECK P.W.B
IC701A,B
HA-1319
PRE AMP.
Q701A,B
2SB534B
BIAS OSC.
TO MAIN P.W.B.
P/R
P/R
MUTING SW.
REC/PLAY HEAD
MICROPHONE SOCKET
IC701A
PRE AMP.
REC. LEVEL CONTROL
PRE AMP.
IC701B
C725A 470P
C724A 0.0022
L702A 15mH
R718A 12K
RV702A 470K(B)
C728A 220P
C726A 100P
C726B 100P
R704A 10
R702A 470
R701A 220
C702A 0.01
C704A 100/10
C701 3.3/25
R701B 220
C702B 0.01
C704B 100/10
R702B 470
R704B 10
C703A 0.0022
R705A 180
R703A 10
C706A 4.7/50
C707A 22/6.3
C710A 0.0022
C711A 0.047
C708A 3.3/25
R707A 3.3K
R708A 220K
R710A 4.7K
C712A 0.47/16
R709A 3.3K
RV701A 47K (B)
C703B 0.0022
R705B 180
R703B 10
C706B 4.7/50
C707B 22/6.3
C710B 0.0022
C711B 0.047
C708B 3.3/25
R707B 3.3K
R708B 220K
R710B 4.7K
C712B 0.47/16
R709B 3.3K
RV701B 47K (B)
RV001A 10K
RV001B 10K
R711A 1K
C705A 220/10
C714A 3.3/25
C716A 0.001
R711B 1K
C705B 220/10
C714B 3.3/25
C716B 0.001
C736A 100P
R712A 10K
C717A 3.3/6.3
R713A 100
C736B 100P
R712B 10K
C717B 3.3/6.3
R713B 100
C718A 3.3/25
R714A 680
C719A 0.015
R716A 4.7K
R717A 2.7K
C722 0.1
R720 180
C723 220/10
R717B 2.7K
R716B 4.7K
C719B 0.015
R714B 680
C718B 3.3/25
R722 22
C736 220/10
R723 100
R727 15
C730 0.01
Q701A
C734A 0.022
R726 2.7K
R725 2.7K
C735 0.022
C731 0.01
Q701B
R724 2.2K
C733 0.015
C732 0.047
C005 0.0015
C004 0.022
BEAT
L702B 15mH
R718B 12K
C725B 470P
C724B 0.0022
RV702B 470K(B)
C728B 220P
6.9V
1.5V
4.2V
0V
7.9V
8.3V
10.5V
9V

Q701A,B
SB534B
IAS OSC.

TO MAIN P.W.B.

P/R P/R MUTING SW.

RV702A 470K(B) C728A 220P

PRE AMP.

4.2V 7.9V 4.2V 4.2V 0V 8.3V

C716A 0.001 C736A 100P R712A 10K C717A 3.3/6.3 R713A 100 C718A 3.3/25 R714A 680 R716A 4.7K C719A 0.015 R717A 2.7K

C716B 0.001 C736B 100P R712B 10K C717B 3.3/6.3 R713B 100 C718B 3.3/25 R714B 680 R716B 4.7K C719B 0.015 R717B 2.7K

C722 0.1 C723 220/10 R720 180

R722 22 C736 220/10

R723 100

R727 15

C729 470P

Q701A C730 0.01 10.5V 9V C734A 0.022

Q701B C731 0.01 10.5V C733 0.015 C735 0.022 0V

R724 2.2K R725 2.7K R726 2.7K

C732 0.047

C005 0.0015 C004 0.022 BEAT

RV702B 470K(B) C728B 220P

PHONO DIN JACK P.W.B

C807A 3.3/25 C807B 3.3/25 C802A 33P C802B 33P C801A 3.3/25 C801B 3.3/25 C808A 0.001 C808B 0.001 R808A 150K R808B 150K R806A 560K R806B 560K R801A 22K R801B 22K R807A 120K R807B 120K C803A 100P C803B 100P R803A 150K R803B 150K R802A 33K R802B 33K R805A 15K R805B 15K C805A 0.0022 C805B 0.0022 R804A 150K R804B 150K C804A 0.015 C804B 0.015 C806A 4.7/25 C806B 4.7/25

PRE AMP. IC801A IC801B

29V 1.9V 13.5V 0.5V 0V

(R) (G) (L) PLAYER CARTRIDGE

REC./P.B. SOCKET

IC801A,B
BA-311
PRE AMP.

D901A,B~904A,B
IN34A
RECTIFIER

Q901AB, Q902AB
2SC1641
SWITCHING

R907A 10K C907A 0.0068 R907B 10K C907B 0.0068 R908A 680 R908B 680 R905A 22K R905B 22K C904A 0.022 C904B 0.022 NOISE LIMITER SW.

C908A 3.3/25 C908B 3.3/25 C910A 0.1/25 C910B 0.1/25 C901A 3.3/25 C901B 3.3/25 C911A 3.3/25 C911B 3.3/25 C902A 3.3/25 C902B 3.3/25 C903A 0.001 C903B 0.001 C905A 0.068 C905B 0.068 C906A 0.033 C906B 0.033 C909A 3.3/25 C909B 3.3/25

D904A D904B D903A D903B D902A D902B D901A D901B

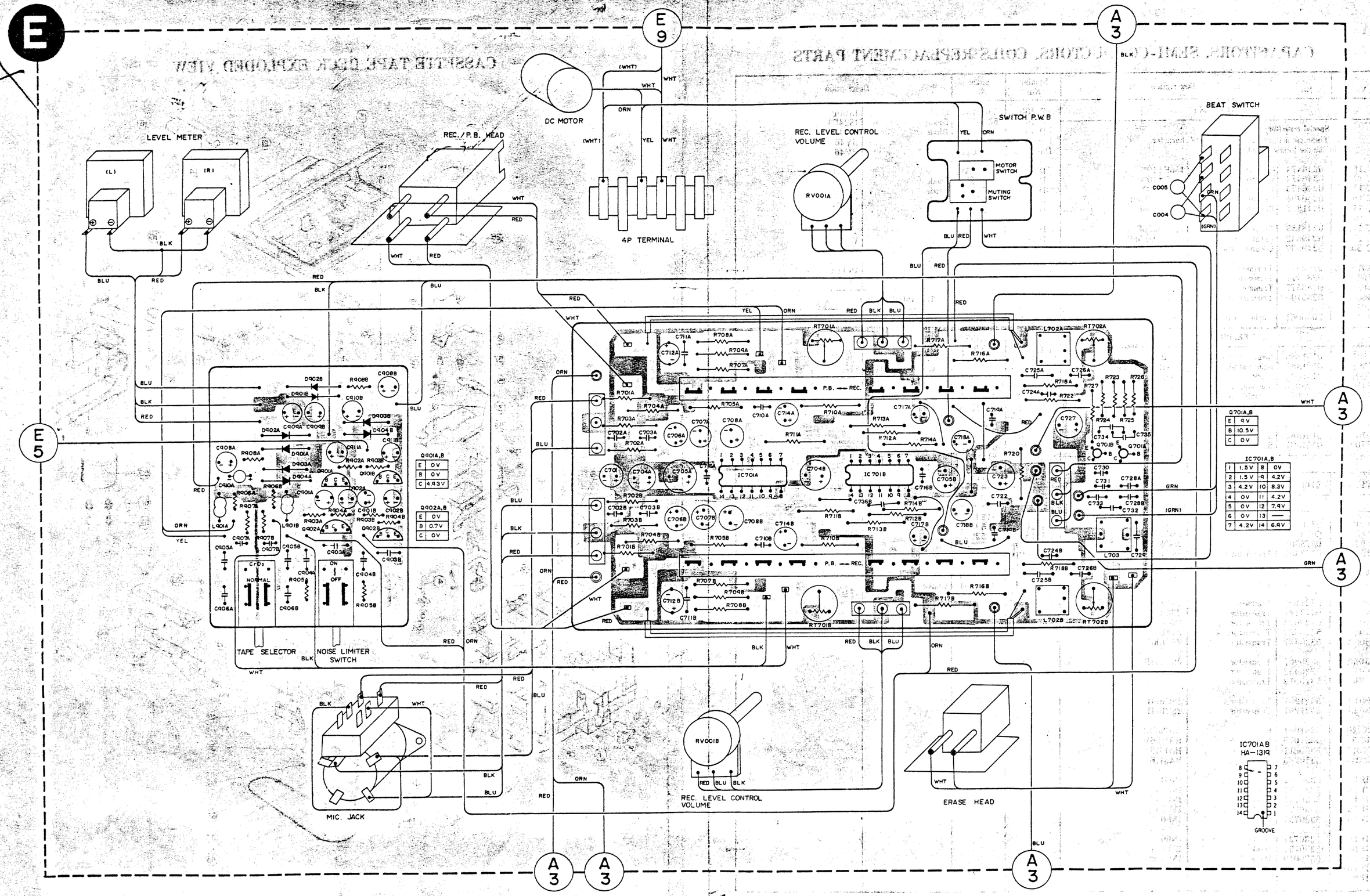
Q901A Q901B Q902A Q902B 4.93V 0.7V

R903A 4.7K R903B 4.7K R904A 270K R904B 270K R902A 33K R902B 33K R906A 1K R906B 1K L901A 3.6mH L901B 3.6mH

CrO2 Nor

VU METER VU METER

NOISE LIMITER P.W.B

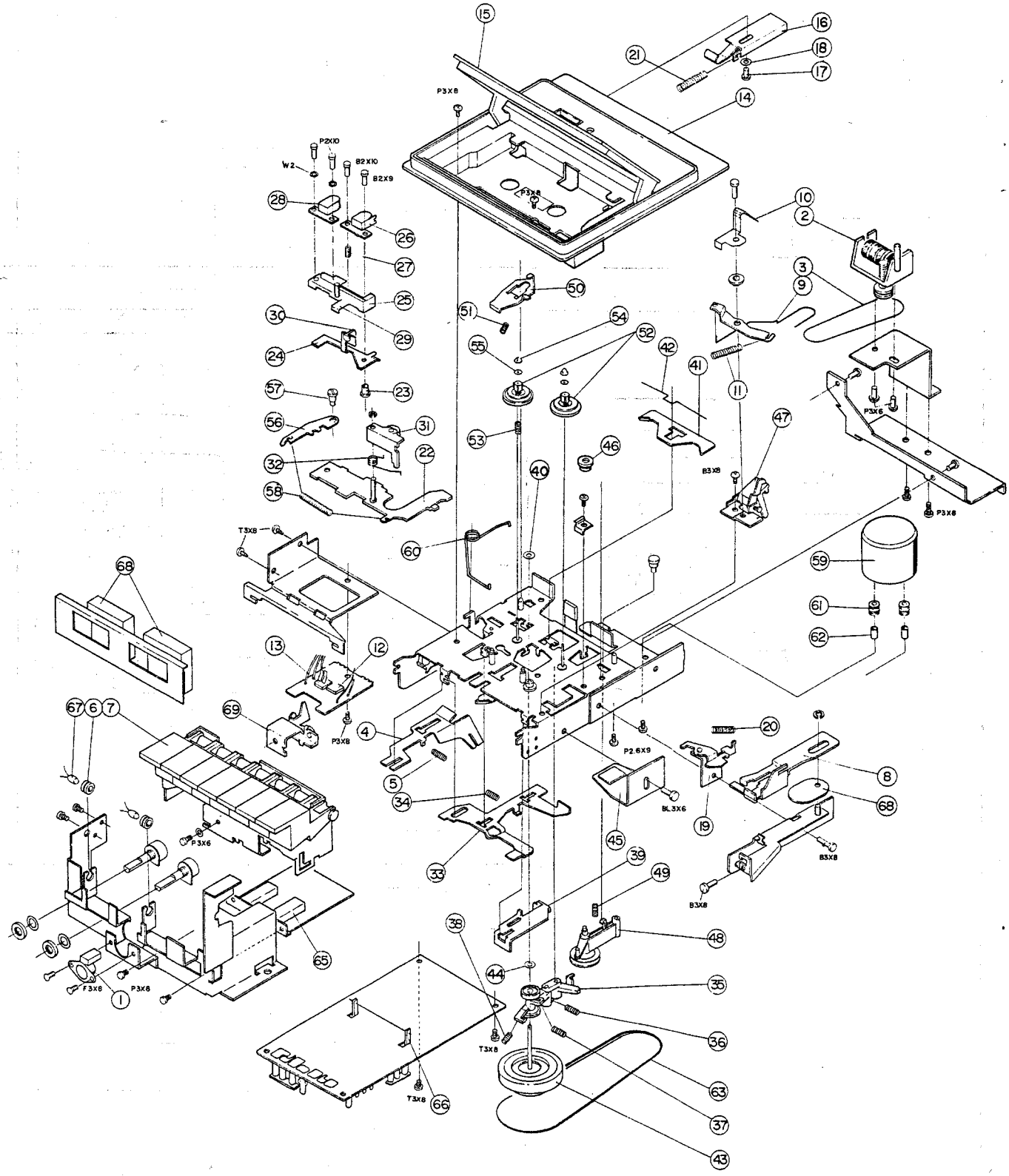

E
E 9
A 3
E 5
DC MOTOR
LEVEL METER
REC./P.B. HEAD
4P TERMINAL
REC. LEVEL CONTROL VOLUME
SWITCH P.W.B
MOTOR SWITCH
MUTING SWITCH
BEAT SWITCH
TAPE SELECTOR
NOISE LIMITER SWITCH
MIC. JACK
ERASE HEAD
REC. LEVEL CONTROL VOLUME
IC701A,B HA-1319
GROOVE
Q701A,B
E 9V
B 10.5V
C 0V
Q901A,B
E 0V
B 0V
C 4.93V
Q902A,B
E 0V
B 0.7V
C 0V
IC701A,B
1 1.5V 8 0V
2 1.5V 9 4.2V
3 4.2V 10 8.3V
4 0V 11 4.2V
5 0V 12 7.9V
6 0V 13 —
7 4.2V 14 6.9V

CAPACITORS, SEMI-CONDUCTORS, COILS REPLACEMENT PARTS

Symbol No.	Stock No.	Description	
CAPACITORS :			
	Special capacitor These capacitors have temperature character. Use the following when replacing.		
C 109	0246474	Ceramic, disc	15pF±10%
C 110	0346474	Ceramic, disc	15pF±10%
C 111	0246474	Ceramic, disc	15pF±10%
C 169	0246496	Ceramic, disc	120pF±0.5pF
C 170	0241852	Ceramic, disc	3pF±0.5pF
C 172	0248159	Ceramic, disc	9pF±0.5pF
C 173	0249542	Ceramic, disc	150pF±0.5pF
C 306	0249537	Ceramic, disc	470pF±10%
CT101~102	0283577	Trimmer	1pF
CT160	0283577	Trimmer	1pF
CT161~165	0283577	Trimmer	1pF
CT166	0283100	Trimmer	16pF
RV101 CV161~162	5056061	Variable capacitor	
RESISTORS :			
RT101	0151888	Semi variable	47kΩ
RT301	0151885	Semi variable	4.7kΩ
RV001A,B	0151409	Variable	10kΩ (A)
RV451A,B	5023016	Variable (bass)	100kΩ(B)
RV452A,B	5023016	Variable (treble)	100kΩ(B)
RV453	5023002	Variable (balance)	50kΩ(Z)
RV454A,B	5023015	Variable (loudness)	100kΩ(B)
RT701A,B	0151888	Semi variable	47kΩ
RT702A,B	0151891	Semi variable	470kΩ
CERAMIC FILTER			
CF201	5160213	Ceramic filter	
SEMI-CONDUCTOR			
Q101	5320941	Transistor	2SK55C
Q102	0573511	Transistor	2SC535C
Q103	0573508	Transistor	2SC461C
Q151	0573487	Transistor	2SC460C
Q401A, B	5320841	Transistor	2SC458LG
Q451A, B	5320023	Transistor	2SC458LG
Q501A, B	5321101	Transistor	2SA836D
Q502A, B	0573481	Transistor	2SC458C
Q503A, B	5320623	Transistor	2SC1213A
Q504A, B	5320603	Transistor	2SA673A
Q505A, B	5320432	Transistor	2SC1061B
Q506A, B	5320967	Transistor	2SA671B
Q601	5320432	Transistor	2SC1061B
Q701A, B	5320912	Transistor	2SB534B
Q901A, B	5321261	Transistor	2SC1641
Q902A, B	5321261	Transistor	2SC1641
IC 201	5351061	IC	AN253BB
IC 301	5351073	IC	HA1156W
IC701A,B	5350211	IC	HA1319
IC801A,B	5350283	IC	BA311F
D 101	5330731	Diode	1N60
D 102	5330771	Diode	1SV55
D 103	5330771	Diode	1SV55
D 104	5330771	Diode	1SV55
D 161	5330731	Diode	1N60
D 162	5330731	Diode	1N60
D 163	5330131	Diode	1S2076
D 201	0575019	Diode	1N60
D 203	5330721	Diode	1N34A
D 205	5330732	Diode	1N60P

Symbol No.	Stock No.	Description	
D 206	5330732	Diode	1N60P
D 207	5330572	Diode	1S2473
D 301	5330572	Diode	1S2473
D501A,B	5340021	Diode	HV46
D502A,B	5340021	Diode	HV46
D 601	5330054	Diode	AW01-13
D 604	5330561	Diode	HZ-16
D 605	5330001	Diode	VO3C
D 606	5330001	Diode	VO3C
D 607	5330001	Diode	VO3C
D 608	5330001	Diode	VO3C
D 609	5330341	Diode	WO6A
D901A,B	5330721	Diode	1N34A
D902A,B	5330721	Diode	1N34A
D903A,B	5330721	Diode	1N34A
D904A,B	5330721	Diode	1N34A
TRANSFORMERS :			
T 101	5123348	FM ANT.	
T 102	0329605	FM IF	
T 103	5123359	FM RF	
T 151	5160022	AM IF	
T 160	5120265	LW RF	
T 161	5123343	SW ANT.	
T 162	5112827	Ferrite core antenna	
T 163			
T 164	5123344	SW OSC.	
T 165	5120461	MW OSC.	
T 166	5120421	LW OSC.	
T 201	0322118	AM IF	
T 202	5148041	FM Discriminator	
T 203	5148042	FM Discriminator	
PT	5211801	Power	
COILS :			
L 102	5123355	FM OSC.	
L 103	5152004	Chcke	
L 161	5152004	Choke	
L501A,B	5150761	Choke	
L702A,B	5120303	Choke	
L 703	5260054	REC OSC.	
L901A,B	0333151	Choke	

CASSETTE TAPE DECK EXPLODED VIEW



REPLACEMENT PARTS

CASSETTE TAPE DECK

Index No.	Part No.	Description
1	5677001	Mic jack
2	5551702	Counter
3	**7668061**	**Counter belt**
4	7249903	Recording function plate
5	6320171	Spring
6	7662573	Lamp holder
7	6274437	Cassette button assembly
8	7255012	Pause slider assembly
9	7257644	Pause lever
10	6324751	Button spring
11	6322301	Spring
12	5603061	Leaf switch
13	5632711	Leaf switch
14	6218833	Cassette panel assembly
15	**6090381**	**Cassette lid assembly**
16	7270421	Cassette lid slider
17	7777617	Special screw
18	7771302	Polyester washer
19	7153955	Eject stopper
20	6300301	Lock spring
21	6300232	Eject spring
22	7264311	Head plate assembly
23	7535222	Coller
24	7262162	Pick up arm
25	6731113	Head stand
26	**5441441**	**Record play back head**
27	6321733	Spring
28	**5445061**	**Erase head**
29	6325931	Holder
30	6730821	Pick up piece
31	**7239876**	**Pressure roller assembly**
32	6306622	Spring
33	7239785	Brake function plate
34	6323063	Spring
35	6721725	Pulley assembly
36	6324154	Spring
37	6300401	Spring
38	6324081	Spring
39	7239791	Eject function plate
40	7771912	Nylon washer
41	7239742	Brake plate
42	6321564	Spring
43	6721822	Flywheel assembly
44	7778183	Polyester washer
45	7239823	Flywheel holder assembly
46	**6381072**	**Idler assembly**
47	7158017	Eject assembly
48	**6721834**	**Take up arm assembly**
49	6321684	Spring
50	7239893	Recording prevention plate
51	6322661	Spring
52	7667666	Turntable assembly
53	6320731	Spring
54	0930002	Cap
55	0948831	Polyester washer
56	7264821	Lock lever
57	7535183	Pin
58	6303075	Spring
59	**5572201**	**Motor**
60	6306302	Spring
61	7669151	Rubber plate
62	7515513	Coller
63	**6350621**	**Belt**
65	**5634051**	**Push switch**
66	**5621191**	**Slide switch**
67	5760742	Lamp
68	5554002	Level meter
69	7159341	Lever holder assembly
70	0725701	Pause lock piece
71	6271993	Push Button

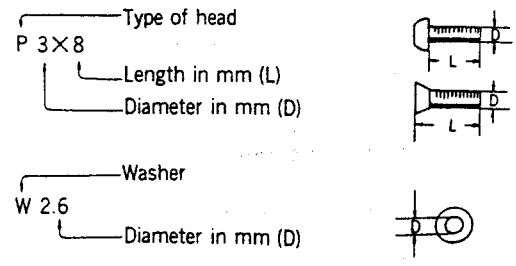
RECORD PLAYER

Index No.	Part No.	Description
1	6411421	Turntable
2	6588251	Turntable cover
3	7102582	Pick up arm assembly
4	**5791581**	**Cartridge**
5	6732611	Arm rest
6	6732701	Push lod assembly
7	6732731	Lift lever
8	6299621	Lift knob
9	6286071	Auto cut knob
10	6286081	Speed selector
11	6732641	EP adaptor
12	**6381091**	**Idler**
13	6732651	Motor pulley
14	6347022	Gear assembly
15	6732662	Auto cut cam
16	**5573031**	**Motor**
17	6732671	Speed selector cam
18	6732681	Adjust plate
19	7266701	Connecting slider
20	6588261	Rubber bush
21	5891421	2P connector assemmbly
22	**5632121**	**Micro switch**
23	6303563	Spring
24	6303562	Spring
25	6303561	Spring
26	6303564	Spring
27	6300531	Spring
28	6309201	Auto cut arm
29	6306801	Spring
30	6306791	Arm spring
31	6303551	Spring
32	6300521	Idler spring
33	6303541	Spring
34	6309211	Spring
35	7780811	Mould screw
36	7780651	Bind head tappingscrew 3㎜φ×30㎜
37	6730701	Special washer

Hardware nomenclature

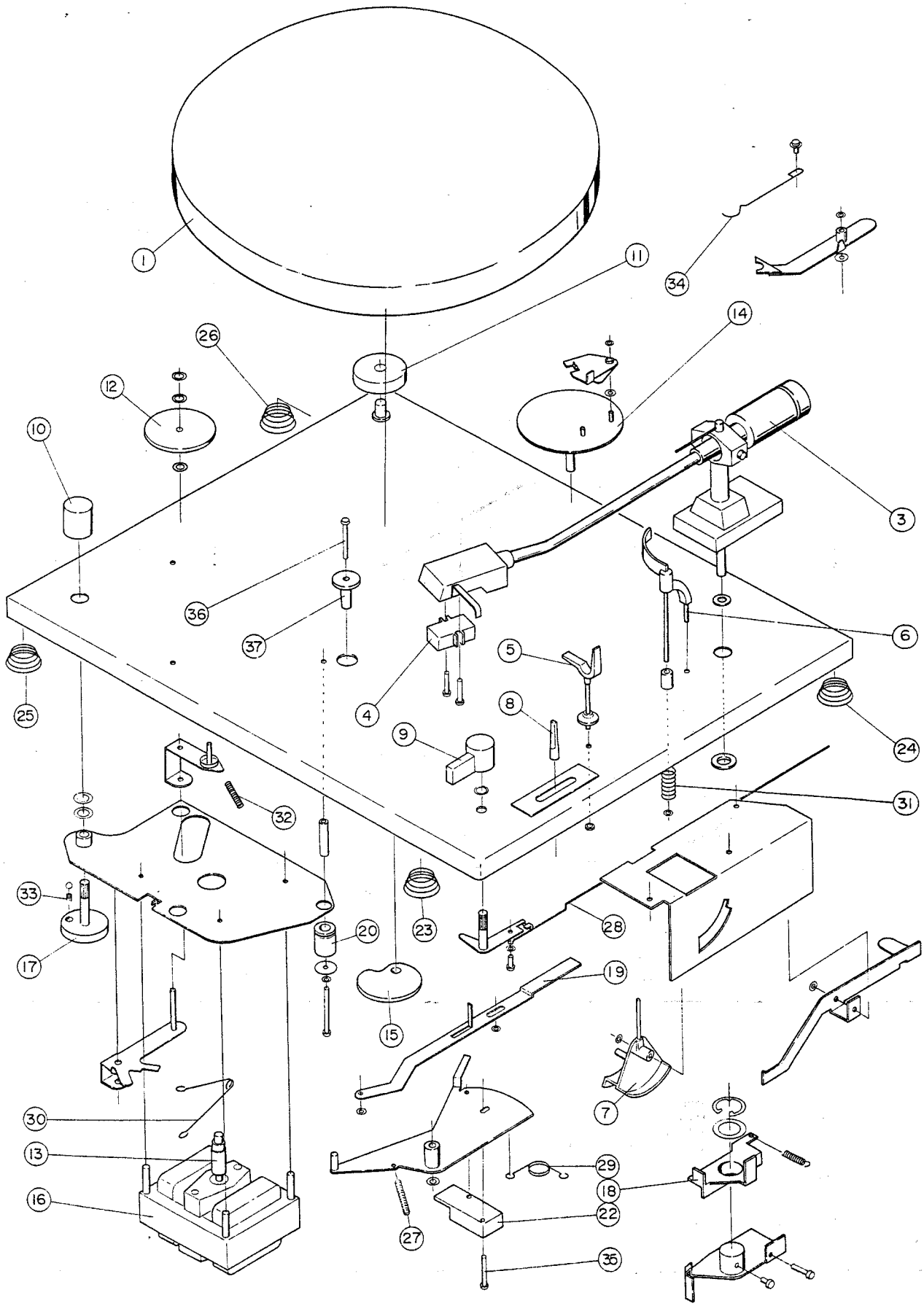
P	Pan head screw		BT	Binding head Tapping screw	
F	Flat countersunk head screw		BL	Bolt	
B	Binding head screw		W	Washer	
T	Round head tapping screw		E	"E" ring	

Example

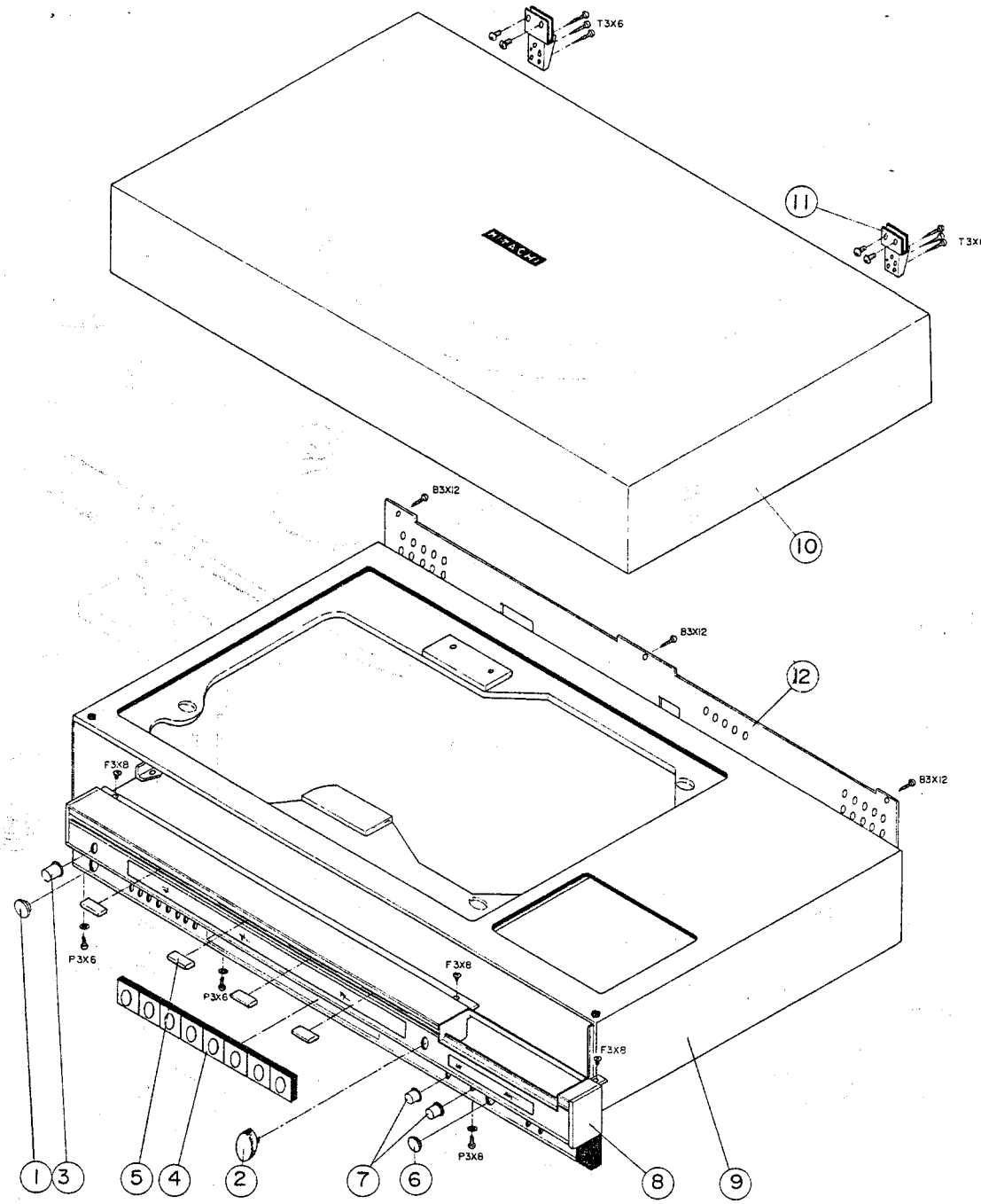


when ordering hardware excluding stated on these lists, be sure to make your orders with type and size.

RECORD PLAYER EXPLODED VIEW

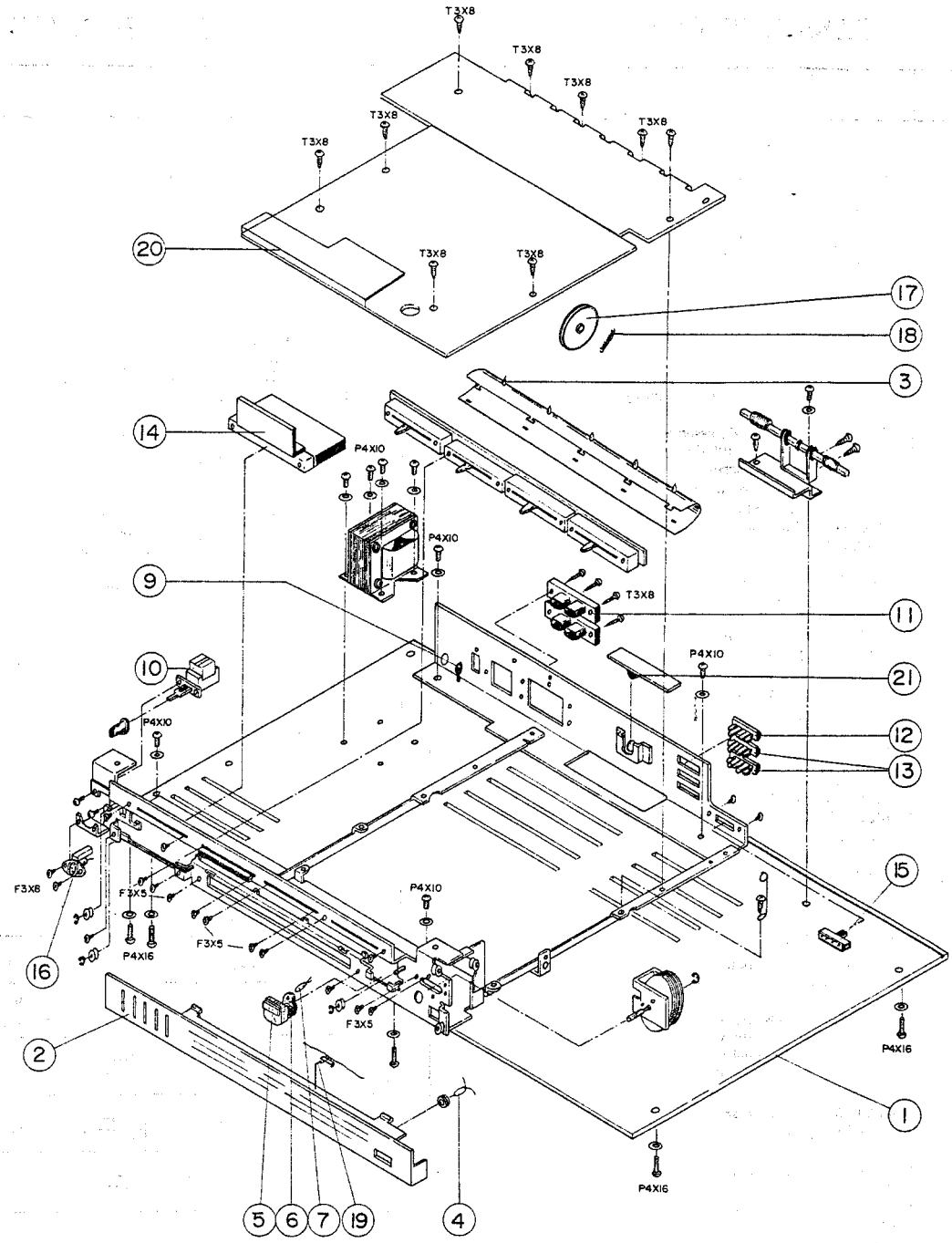


CABINET EXPLODED VIEW AND REPLACEMENT PARTS



Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
	5890031	FM Antenna plug }		6154872	Cabinet (SC)
	5421131	Microphone } accessorles		6154873	Cabinet (SW)
	5421132	Microphone (UK) }	10	6180245	Dust cover assembly
1	5891011	Headphone connector	11	6337202	Hinge assembly
2	6280824	**Knob (TUNING)**	12	6192423	Back cover (SW, WG, SC)
3	6258814	**Push Button (POWER)**		6192424	Back cover (UK)
4	6280823	**Push Button (FM, MW, SW, LW, TR, PHONO, TAPE, MONO)**			
5	6295201	**Slide knob (VOLUME, BALANCE, BASS, TREBLE)**			NOTE
6	6730431	Din jack cap			UK : England
7	6280825	**Knob (REC. VOLUME)**			FR : France
8	6670571	Front metal			WG : Germany
9	6154871	Cabinet (UK, SW, WG)			SW : Switzer land
					SC : Scandinavia

MAIN CHASSIS EXPLODED VIEW AND REPLACEMENT PARTS



Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
1	6154882	Bottom plate	12	5671661	FM antenne jack
2	6470036	Scale plate	13	5671671	AM antenne jack
3	**5760711**	**Lamp**	14	5631682	FM pre tuned assembly
4	**5760345**	**Lamp**	**15**	**5620681**	**Slide switch**
5	**5552009**	**Tuning meter**	16	5671691	Headphone jack
6	7663223	Rubber bush	17	6341863	Pulley
7	**5760742**	**Lamp**	18	6316231	Spring
8	**5746171**	**Power cord (SW)**	19	6395085	Pointer
	5746221	**Power cord (SC)**	**20**	**5637041**	**Push switch**
	5746291	**Power cord assembly (UK)**			
	5746154	**Power cord (WG, FR)**		**5721062**	**Fuse (4A)**
9	0043793	Bushing		**5720177**	**Fuse (2A)**
	6711352	Bushing (UK)		**5721012**	**Fuse (250mA)**
				5720175	**Fuse (800mA) [UK]**
10	**5632672**	**Power switch**			
11	5677011	Speaker jack	21	5651141	5P Din jack